

---

**REMARKS**

In the Official Action of November 24, 2004, Claims 1-4, 8 and 10-37 are identified as currently pending in the application. Claims 17-35 are withdrawn from further consideration and claims 5-7 and 9 have been cancelled. As will be discussed in detail, dependent Claim 4 is hereby cancelled and independent Claims 1 and 12 are amended to clarify the patentable differences between the presently claimed invention and the cited prior art.

In the outstanding Official Action, Claims 1-4, 10, 11 and 36 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,221,456 (hereinafter "Pogorski") in view of U.S. Patent No. 4,636,415 (hereinafter "Barito"). As set forth on page 3 of the referenced Official Action, Pogorski discloses a panel system that provides thermal insulation having "structural integrity" and "load-supporting capability", see col. 5 lines 30, 31. The Pogorski panel comprises an outer-gas impermeable envelope 2 and an inner gas-permeable envelope 7 enclosing a fill made up of coarse granules 4 and fine particles 5. It is respectfully noted that the coarse granules 4 are necessary for the Pogorski panel to achieve its load supporting integrity, col.4, lines 1-25.

In comparison, the applicants' claimed invention relates to a thermal insulation layer system that has little, if any, inherent rigidity as evidenced by the reflective layer, the carrier layer and the presence of a fill layer formed of compressible powder.

Returning to the Official Action, Pogorski's envelopes 2 and 3 are deemed to read on applicants' reflective and carrier layers, respectively. However, Pogorski has specifically recited and claimed envelopes and not layers. As set forth in the Webster's II New Riverside University Dictionary, "envelope" is defined as "1. something that envelops. 2. a flat, folded paper container esp. for a letter." The word "envelope" communicates the ability to envelop which is clearly beyond applicants' recitation of "layer" which is defined in Webster's II as: "1. a single thickness, coating, or stratum spread out or covering a surface."

Notwithstanding whether Pogorski's envelopes 2 and 3 read on applicants' layers, Pogorski's internal fill composed of coarse granules 4 and fine particles 5 only contacts the inner envelope 3. There is no teaching in Pogorski whatsoever of having the internal

fill contact the outer envelope 2. In fact, outer envelope 2 envelops and contacts an intermediate envelope 7 which envelops and contacts inner envelope 3. Both of the independent Claims 1 and 12 clearly recite the embodiment of the present invention wherein the fill layer is located between and contacts both the reflective and carrier layers.

Because neither Pogorski or Barito teaches positioning a layer of powder between and contacting inner and outer layers to create a non weight bearing, flexible layer system, it is respectfully requested that the rejection of the claims under 35 U.S.C. 103 (a) be withdrawn.

It is further noted that Pogorski clearly intends and must have a number of coarse granules 4 in order to achieve its desired weight-bearing structure. To remove granules 4 in the attempt to read on applicants' invention would defeat the core concept of Pogorski which is to create a panel system that has structural integrity and is weight-bearing. For that reason, it is believed that the modification of Pogorski to remove granules 4 and replace them with the powder taught in Barito would actually teach away from the panel system in Pogorski and would clearly be unobvious to Pogorski. For additional reason, it is respectfully requested that the rejection of the claims under 35 U.S.C. 103 (a) be withdrawn.

---

**CONCLUSION**

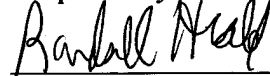
Upon acceptance of the present communication, claims 1-3, 8, 10-16, 36 and 37 remain in the present application. For the reasons stated above, it is believed that all of the remaining claims are patentable and it is respectfully requested that a Notice of Allowability be issued.

The Examiner is invited to contact Applicant's undersigned representative at direct dial (321) 867-7214 if there are any questions regarding this communication or if prosecution of this application may be assisted thereby.

Any additional charges necessary to prosecute this application are authorized to be drawn against Deposit Account 14-0116.

Date: Feb 15, 2005

Respectfully submitted,



Randall M. Heald

Patent Counsel, Kennedy Space Center  
Reg. No. 28,561**CERTIFICATE OF MAILING**

I certify that this correspondence will be deposited with the United States Postal Service as first class mail with proper postage affixed in an envelope addressed to:  
"Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" on the date below.

Date: February 15, 2005Carol Anne Dunn  
Paralegal Specialist